Ore was discovered in 1872 by a prospector who named the mine after himself. When sufficient work had been done in the discovery shaft to prove the continuation of the orebody a tunnel was started in the canyon side. Connection was soon made with the orebody and shipments commenced.

In time the ore above the tunnel level was pretty well exhausted and the owners decided to have a more convenient way of extracting the mineral. A lower tunnel, starting near the level of the canyon road, was driven. It was a crosscut tunnel and a great amount of digging had to be done to bring it to the ore, but when the connection was made the bore was 1,200 feet below the summit of the mountain.

Several fissures were encountered and some carried pay ore all the way up to grass-roots. The original vein was followed on its strike for several hundred feet. The removal of the ore bodies left giant crevices and caverns as silent witnesses to the wealth of the mine. In places, the measurements show, the ore bodies were as thick as twenty-four feet. In other veins, such as the Corkscrew fissure, the ore twisted about in narrow spiral lenses.

Large scale production continued for many years. The smelter returns during this period are said to have totalled $1,200,000 of which $118,000 was paid in dividends. Then the ore supply in the veins above the tunnel level began to run short. The miners turned their attention to the floor of the tunnel where the various fissures could be seen going down in all their primary strength and richness.

Winzes were put down on the ore at various places. Water came in within a few feet and became more troublesome as the winzes were deepened. In spite of the handicap underhand stoping was continued in four of the winzes to a depth of seventy feet or more. The showing in each was so good that a determined effort was made to get at the deeper ore measures. A large working shaft was started in the tunnel near the face. The best devices then known were installed to lift the water.

Strenuous and costly as the operation was the company succeeded in driving the big shaft, or winze, 300 feet down from the tunnel. Then a drift was started back to crosscut the ore in which the shorter winzes had been sunk. One day the drift broke into an underground watercourse and the torrent poured into the workings so rapidly that the miners fled for their lives leaving their tools behind them.

That drift was not seen again by human eyes for many years.

The flooding of the deep workings took from the owners their last hope of continuing production on the former scale. They kept a small force busy for a time running out the ore left in the upper stopes and lenses. When even this system failed to bring a profit they let the property to lessees and the Maxfield degenerated to the state described above and in which it was found by Mr. Vahrenkamp.

He was originally a New York man and he still had a wide acquaintance among influential business men and capitalists in the east, but in the practice of his profession, that of mining engineer, he had become identified with the great west. He was on the staff of Captain James R. DeLamar when that magnate carried out his gigantic mining enterprises and had a hand with Geoge Wingfield in the development of the camp of Goldfield, Nevada, and the Goldfield Consolidated.

The general opinion that the Maxfield was done for carried no weight with this experienced engineer. The only question in his mind was whether the deep-seated orebodies in the mine were big enough and rich enough to pay. He had no misgivings about meeting the difficulties which defeated the earlier operators.

His examination of the property confirmed all that tradition claimed for the lost orebodies. The owners were willing to sell the property at a low price and on reasonable terms. The sale was consummated early in 1915 and the company organized by Mr. Vahrenkamp lost no time in getting down to work.

The first and principle thing on the program was equipment. Mr. Vahrenkamp recognized that the failure of the early attempts to control the water was not due to lack of ability on the part of the engineers of that day, but to the inadequate mechanical methods of the day.

He put in two air compressors of special design and ran a steel pipe line 2,000 feet into the mine. Two sources of power were provided, one a private generating plant operated by the stream in the canyon; the other a transmission line connecting with the hydro-electric plant of the Utah Power & Light company.

The power units were the kernel of the whole enterprise, for without cheap and abundant power it would be impossible to handle the water-flow which had baffled the former operators of the mine. The independent units insured the continuous operation of the plant under all contingencies as well as a large reserve of power for use in emergencies.

The equipment included power and centrifugal pumps capable of handling a water flow of 1,500 gallons a minute although such a volume of water would be far in excess of anything the mine was likely to make.

The lighting of the mine was done by electricity. Air hoists were put in at the various winzes and inclines where lifting was necessary and machine drills provided.

Persons who have made a study of the geology of Big Cottonwood district venture the opinion that the most promising ore horizon in the Maxfield has not been explored and that the large ore bodies heretofore mined will appear small in comparison with the deposits which will be developed when the fissures are followed into the lime-quartzite contact.

The known ore makes in the bedding planes of the black and white lime which dip at an angle of 45 degrees and have a northwesterly and southeasterly strike. The strike of the ore-making fissures is north and south.

No attempt was made to follow the fissures into the lime-quartzite contact as the importance of this junction was not appreciated until 1914 when the Cardiff mine, southeast of the Maxfield, tunneled into the contact and found its mammoth orebody.

The Cardiff contact is formed by the overthrusting of the formation from east to west. The overthrust has been traced from the Cardiff down the South Fork to the Maxfield. Its occurrence now explains the origin of the ore bodies in the celebrated Carbonate mine between the Maxfield and Gardiff.

The ores above the tunnel level in the Maxfield were silver-lead carbonates. Below the water level they are a heavy galena carrying values in gold, silver, lead, and copper, the range of values being 25 cents to $18 gold, 25 to 72 ounces silver, 10 to 60 per cent lead and 1.5 to 7 per cent coper. The ore is usually clean as mined and free from waste.

The company now in control of the Maxfield is the Boston Development company, organized by Mr. Vahrenkamp. Two years of his management has wrought a remarkable change in the surface appearance as well as the underground condition of the property. There is nothing lonesome about it now. The boarding house hums with conversation.

The chug-chug-chug of the compressors continues day and night. Ore wagons are loading in the yard and the ore thunders down into the bins from the tipple.

Mr. Vahrenkamp has opened up nearly all the old ore bodies on their dip under the tunnel and others beside. He has begun prospecting the lime-quartzite contact. He is producing a splendid quality of ore. The water in the deepest levels is being handled without the least difficulty. During the summer the output of the Maxfield was running about $25,000 a month gross and since then there has been a large increase in the price of the metals contained in the product.

While he was rejuvenating the Maxfield Mr. Vahrenkamp found time to study the geology of the surrounding country and to project a tunnel to the Maxfield from the canyon north of the property which would give much greater depth on the ore, shorten the haul to the smelter and probably open a number of new ore-bearing fissures.

At present the Maxfield estate of the Boston Development company consists of forty-four claims not counting the options and right of way on the line of the proposed deep tunnel. The company has an authorized capitalization of 500,000 shares of which 430,000 have been issued. The par value is $1.00 per share.

The other properties of which Mr. Vahrenkamp has recently taken charge are in the great copper region of which Mackay, Idaho, is the center.

The Empire Copper, like the Maxfield, is a property with a past. It used to be called the White Knob. It was first located many years ago. There were some good bodies of copper ore near the surface and the indications were so pleasing that it was an easy matter to interest an eastern syndicate and finance a company to operate the property on a larger scale.

It was operated on a larger scale. A narrow gauge railroad was constructed from the mine to the main railroad. The company put in a sawmill and a smelter. When the superintendent wanted anything he had only to ask for it and it was his.

Large quantities of ore were taken out, but for some reason the mine did not pay dividends. Most of the time it did not even pay expenses. Citizens of Mackay tell of high salaries and high living which may account for the deficit in the treasury. One by one the stockholders dropped out until the company became a skeleton. The smelter shut down and the mine was leased in small blocks to individual miners.

When leasing failed to pay the interests into whose possession the property had passed offered to sell it for a song and a rag-time melody at that. Ogden, Utah, capitalists heard of the bargain and caused the old mine to be examined The reports convinced them that it was mismanagement and not lack of merit that had brought it to its sorry state. The result was a sale.

Money was advanced by the new owners to put the property in shape for low-cost production. The leasing system was continued, but on a more businesslike basis. It wasn't long before the royalties began to come in. Some of the lessees opened enormous bodies of good copper ore and the advancing copper market did the rest.

What happened is best indicated by the fact that the Empire declared its fifth dividend and an extra on December 6. The regular dividends were at the rate of 5 cents a share and the extra, payable on December 22, called for 2 cents a share. The company is capitalized with 1,200,000 shares, par value $1.

While the company was paying these dividends from royalties the lessees were paying themselves profits that made Croesus look like a piker. The question naturally arose as to whether it would not be good business to cancel the leases and work the property on company account. The idea seemed a good one. To make it effective a capable engineer was needed.

Who could be better in such a position than the man who had rejuvenated the Maxfield? The